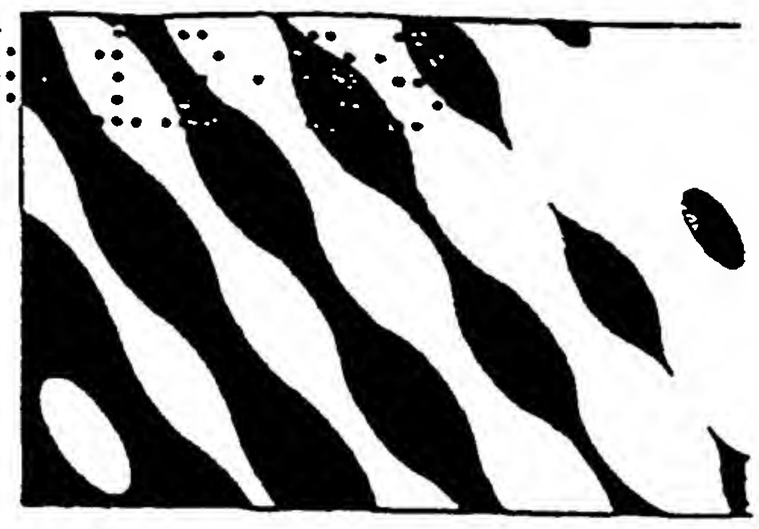
Ultravis 10



TECHNIGRAM

PROPERTIES AND APPLICATIONS OF ULTRAVIS HIGH PERFORMANCE POLYBUTENE POLYMERS

BP Chemicals, Europe's largest producer of polybutenes with production sites at Lavera, France and Grangemouth, Scotland, has now introduced a new high performance polybutene polymer called Ultravis to its product range. Ultravis polybutene differs from conventional polybutenes in that it is free of chlorine and offers a higher than usual proportion of reactive double bonds.

The Ultravis high performance polymer now offers the petroleum additives industry a polybutene that is chlorine free. A property which will afford additives manufacturers an important breakthrough in the production of more environmentally friendly additives.

The enhanced reactivity of Ultravis, in reactions involving the double bond at the end of the hydrocarbon chain, makes it especially suited to the manufacture of lubricating oil and fuel additives via the addition of maleic anhydride to form a polybutenyl succinic anhydride, (PIBSA). The more reactive nature of the Ultravis molecule will also offer significant advantages in other "ene" reactions and reactions of the double bond such as epoxidation, ozonolysis, sulphonation, reaction with thiols and copolymerisation with other unsaturated monomers.

This technical note discusses the properties of the Ultravis Polybutene currently available and a number of its potential applications.

SPECIFICATION AND PHYSICAL PROPERTIES

Specification	Ultravis 10	Test Method
Viscosity at 100°C (cst)	205–245	ASTM D 445
Flash Point PMCC (min. °C)	150	ASTM D 93
Water (max. ppm)	100	ASTM D 1744 (modified)
Vinylidene end groups (min. %)	60	^{13}C n.m.r. spectroscopy
Colour (max. hazen)	100	ASTM D 1209
Appearance	Free from visible impurities	Visual

Typical Properties	Ultravis 10	Test Method
Molecular weight	970	ASTM D 3593
Density at 15°C (g cm^{-3})	0.894	IP 190/86